

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A receiver system comprising:

a searcher to identify pilot signals within a received signal, said pilot signals corresponding to a plurality of remote base stations; and

a pilot tracking unit to continuously track pilot signals identified by said searcher, said pilot tracking unit to track at least one pilot signal associated with an affiliated base station and, when identified by said searcher and selected for tracking, at least one pilot signal associated with a non-affiliated base station;

a receiver to demodulate data within the received signal that is associated with a predetermined user, said receiver using information gathered by the pilot tracking unit to demodulate said data; and

said receiver includes an interference mitigation receiver to reduce the negative effect of interference in the data demodulation using information gathered by the pilot tracking unit.

2. (Original) The receiver system of claim 1, wherein:

 said pilot tracking unit performs continuous time tracking and continuous channel tracking for said at least one pilot signal associated with said affiliated base station and, when identified by said searcher and selected for tracking, for said at least one pilot signal associated with said non-affiliated base station.

3. (Original) The receiver system of claim 1, wherein:

 said pilot tracking unit performs continuous time tracking, continuous channel tracking, and continuous frequency tracking for said at least one pilot signal associated with said affiliated base station and, when identified by said searcher and selected for tracking, for said at least one pilot signal associated with said non-affiliated base station.

4. (Original) The receiver system of claim 1, wherein:
said pilot tracking unit continuously tracks a majority of the pilot signals identified by said searcher.
5. (Original) The receiver system of claim 1, comprising:
a controller to determine which pilot signals identified by said searcher will be continuously tracked by said pilot tracking unit.
6. (Original) The receiver system of claim 5, wherein:
said controller determines which pilot signals identified by said searcher will be continuously tracked within said pilot tracking unit based on a predetermined selection criterion.
7. (Original) The receiver system of claim 6, wherein:
said predetermined selection criterion includes a condition related to pilot signal strength.
8. (Cancelled)
9. (Currently Amended) The receiver system of claim [[8]] 1, comprising:
an SSDT unit to dynamically select a single base station to transmit user data to the receiver system based on tracking information gathered by the pilot tracking unit.
- 10 (Currently Amended) The receiver system of claim [[8]] 1, wherein:
said receiver includes a rake receiver having a plurality of rake fingers, wherein said information gathered by the pilot tracking unit is used to dynamically optimize the assignment of rake fingers within the rake receiver.
11. (Cancelled)

12. (Currently Amended) The receiver system of claim [[11]] 1, wherein:
said interference mitigation receiver includes a demodulation unit to demodulate data-bearing interference signal components based on information gathered by the pilot tracking unit.

13. (Currently Amended) The receiver system of claim [[11]] 1, wherein:
said interference mitigation receiver includes a pilot interference reduction unit to reduce the level of pilot signal interference using information gathered by the pilot tracking unit.

14. (Currently Amended) The receiver system of claim [[8]] 1, comprising:
a decoder to decode an output signal of the receiver; and
a decision metric correction unit to modify at least one decision metric used by the decoder to decode the output signal of the receiver based on information gathered by said pilot tracking unit.

15. (Original) The receiver system of claim 1, wherein:
said pilot tracking unit generates signal strength related information and diversity information for one or more remote base stations for use in making a soft-handoff decision.

16. (Original) The receiver system of claim 1, comprising:
a position estimator to estimate a present position of the receiver system using information gathered by said pilot tracking unit.

17. (Original) The receiver system of claim 16, wherein:
said position estimator estimates a present position of the receiver system using pilot signal timing estimates gathered by said pilot tracking unit in a time difference of arrival (TDOA) position location technique.

18. (Original) The receiver system of claim 1, wherein:
said pilot tracking unit includes a plurality of independent pilot trackers to each continuously track a single assigned pilot signal.

19. (Currently Amended) A method for processing a received signal within a communication device, comprising:

identifying pilot signals within the received signal, said pilot signals being associated with a plurality of remote base stations; and

continuously tracking identified pilot signals for timing and channel information, wherein continuously tracking includes continuously tracking at least one pilot signal associated with an affiliated base station and continuously tracking, when identified during identifying pilot signals and selected for tracking, at least one pilot signal associated with a non-affiliated base station; and

using said continuously tracked timing and channel information to dynamically select a single remote base station to transmit user data to the mobile communication device in an SSDT mode of operation.

20. (Original) The method of claim 19, wherein:

continuously tracking includes only continuously tracking identified pilot signals that satisfy a predetermined selection criterion.

21. (Original) The method of claim 20, wherein:

said predetermined selection criterion is related to a signal strength of an identified pilot signal.

22. (Original) The method of claim 20, wherein:

said predetermined selection criterion gives priority to certain base stations.

23. (Original) The method of claim 19, comprising:

dynamically selecting identified pilot signals to be continuously tracked.

24. (Original) The method of claim 19, wherein:

continuously tracking identified pilot signals includes continuously tracking said pilot signals for frequency information.

25. (Original) The method of claim 19, comprising:

providing continuously tracked timing and channel information to a receiver for use in demodulating a received signal.

26. (Cancelled)

27. (Original) The method of claim 19, comprising:

using said continuously tracked timing and channel information to modify at least one decision metric used by a decoder to decode data associated with a predetermined user.

28. (Original) The method of claim 19, comprising:

using said continuously tracked timing and channel information to estimate a position of the mobile communication device.

29. (Original) The method of claim 19, comprising:

dynamically assigning rake fingers within a rake receiver based on said continuously tracked timing and channel information.

30. (Currently Amended) A receiver system comprising:

a searcher to identify pilot signals within a received signal, said pilot signals corresponding to a plurality of remote base stations;

a pilot tracking unit to continuously track pilot signals identified by said searcher for timing and channel information, said pilot tracking unit to track at least one pilot signal associated with an affiliated base station and, when identified by the searcher and selected for tracking, at least one pilot signal associated with a non-affiliated base station;

at least one rake receiver to demodulate data within the received signal that is associated with a corresponding user, said at least one rake receiver having a plurality of rake fingers; and

a controller to manage the operation of said searcher, said pilot tracking unit, and said rake receiver, wherein said controller includes a selection module to select individual pilot signals identified by the searcher to be continuously tracked by the pilot tracking unit[[.]]; and

said at least one rake receiver including an interference mitigation receiver to reduce the negative effect of interference in the data demodulation using information gathered by the pilot tracking unit.

31. (Original) The receiver system of claim 30, wherein:

 said controller includes a rake finger assignment module to dynamically assign rake fingers to individual paths based on the timing and channel information developed by the pilot tracking unit.

32. (Original) The receiver system of claim 30, wherein:

 said controller includes a module to assemble base station diversity information from the pilot tracking unit for use in making soft-handoff decisions.

33. (Original) The receiver system of claim 30, wherein:

 said pilot tracking unit continuously tracks a majority of the pilot signals identified by said searcher.

34. (Currently Amended) A communication device comprising:

 a searcher to identify pilot signals within a received signal, said pilot signals corresponding to a plurality of base stations;

 a pilot tracking unit to continuously track selected pilot signals identified by said searcher;

 at least one rake receiver to demodulate data within a received signal, said at least one rake receiver having a plurality of rake fingers; and

 a controller to select pilot signals identified by said searcher to be tracked by said pilot tracking unit, said controller to select said pilot signals to be tracked based on a predetermined selection criterion, wherein said predetermined selection criterion permits a pilot signal that is

not assigned to a rake finger of said at least one rake receiver to be tracked by said pilot tracking unit[. . .];

said at least one rake receiver including an interference mitigation receiver to reduce the negative effect of interference in the data demodulation using information gathered by the pilot tracking unit; and

said interference mitigation receiver includes a demodulation unit to demodulate data-bearing interference signal components based on information gathered by the pilot tracking unit.

35. (Previously Presented) The communication device of claim 34, wherein:

 said controller considers resources available within said pilot tracking unit to select pilot signals to be tracked by said pilot tracking unit.

36. (Previously Presented) The communication device of claim 34, wherein:

 said controller considers signal strength related parameters of the identified pilot signals to select pilot signals to be tracked by said pilot tracking unit.

37. (Previously Presented) The communication device of claim 34, wherein:

 said controller considers priorities given to certain base stations to select pilot signals to be tracked by said pilot tracking unit.

38. (Previously Presented) The communication device of claim 34, wherein:

 said controller is programmed to periodically reevaluate a decision to track a particular pilot signal within said pilot tracking unit.

39. (Previously Presented) The communication device of claim 34, wherein:

 said predetermined selection criterion permits both affiliated and non-affiliated base stations to be tracked by said pilot tracking unit.

40. (Previously Presented) The communication device of claim 34, wherein:

said predetermined selection criterion permits all pilot signals identified by said searcher to be selected for tracking.

41. (Currently Amended) A communication device for use within a communication system implementing code division multiple access (CDMA), comprising:

a pilot tracking unit to continuously track selected pilot signals associated with a plurality of base stations;

at least one rake receiver to demodulate data within a received signal that is associated with a user of the communication device, said at least one rake receiver having a plurality of rake fingers; **and**

a controller to assign rake fingers within said at least one rake receiver to individual paths associated with the received signal based on information developed by the pilot tracking unit;

said at least one rake receiver includes an interference mitigation receiver to reduce the negative effect of interference in the data demodulation using information gathered by the pilot tracking unit; and

said interference mitigation receiver includes a pilot interference reduction unit to reduce the level of pilot signal interference using information gathered by the pilot tracking unit.

42. (Previously Presented) The communication device of claim 41 wherein:

 said selected pilot signals are selected based upon a selection criterion that permits a pilot signal that is not assigned to a rake finger of said at least one rake receiver to be tracked by said pilot tracking unit.

43. (Previously Presented) The communication device of claim 41 wherein:

 said controller dynamically assigns rake fingers to individual paths based on a predetermined assignment criterion.

44. (Previously Presented) The communication device of claim 43 wherein:

 said predetermined assignment criterion considers the resources available within said at least one rake receiver.

45. (Previously Presented) The communication device of claim 43 wherein:
said predetermined assignment criterion considers a signal strength related parameter associated with pilot signals tracked by the pilot tracking unit.
46. (Previously Presented) The communication device of claim 41 wherein:
said controller is programmed to determine whether an assignment of a rake finger will be a long-term assignment or a dynamic assignment.
47. (Previously Presented) The communication device of claim 41 wherein:
said pilot tracking unit continuously tracks said selected pilot signals for timing and channel information.
48. (Previously Presented) The communication device of claim 41 wherein:
said pilot tracking unit continuously tracks said selected pilot signals for timing, channel, and frequency information.

Claims 49 - 54. (Canceled)

55. (Currently Amended) A method for use within a wireless communication system comprising:

obtaining base station related information that was assembled by continuously tracking selected base station pilot signals received by a communication device, said selected base station pilot signals including a pilot signal that is not presently assigned to a rake finger within the communication device; and

choosing an active set of base stations for the communication device based on said base station related information;

using said continuously tracked timing and channel information to dynamically select a single remote base station to transmit user data to the mobile communication device in an SSDT mode of operation; and

using said continuously tracked timing and channel information to modify at least one decision metric used by a decoder to decode data associated with a predetermined user.

56. (Previously Presented) The method of claim 55, wherein:

 said base station related information includes detailed signal strength reports for base stations about the communication device.

57. (Previously Presented) The method of claim 55, wherein:

 said base station related information includes multi-path diversity information for base stations about the communication device.

58. (Previously Presented) The method of claim 55, wherein:

 said base station related information includes antenna diversity information for base stations about the communication device.

59. (Previously Presented) The method of claim 55, wherein:

 said base station related information includes signal strength reports for base stations about the communication device that have been modified based on at least one of the following: multi-path diversity information for base stations about the communication device and antenna diversity information for base stations about the communication device.

60. (Previously Presented) The method of claim 55, wherein:

 obtaining base station related information and choosing an active set of base stations are performed at a network location within the wireless communication system.

61. (Previously Presented) The method of claim 60, further comprising:

 transmitting information identifying said active set of base stations to the communication device.

62. (Currently Amended) A method for use within a wireless communication system

comprising:

continuously tracking selected pilot signals received by a communication device from a plurality of base stations to generate base station information, said selected pilot signals including a pilot signal that is not presently assigned to a rake finger within the communication device; **and**

selecting a base station to transmit data to the communication device in a site selection diversity transmission (SSDT) mode of operation based on said base station information

using said continuously tracked timing and channel information to dynamically select a single remote base station to transmit user data to the mobile communication device in an SSDT mode of operation; and

using said continuously tracked timing and channel information to estimate a position of the communication device.

63. (Previously Presented) The method of claim 62, wherein:

continuously tracking includes continuously tracking said pilot signals for timing and channel information.

64. (Previously Presented) The method of claim 62, wherein:

continuously tracking includes continuously tracking said pilot signals for timing, channel, and frequency information.

65. (Previously Presented) The method of claim 62, wherein:

said pilot signals that are continuously tracked are selected for continuous tracking from pilot signals identified by a searcher within the communication device.

66. (Previously Presented) The method of claim 62, wherein:

selecting a base station is performed within the communication device.

67. (Currently Amended) A method for use within a wireless communication system comprising:

continuously tracking selected pilot signals received by a mobile communication device from a plurality of base stations to generate base station information, said selected pilot signals including a pilot signal that is not presently assigned to a rake finger within the mobile communication device; **and**

using said continuously tracked timing and channel information to dynamically select a single remote base station to transmit user data to the mobile communication device in an SSDT mode of operation; and

estimating a position of the mobile communication device based on said base station information.

68. (Previously Presented) The method of claim 67, comprising:

dynamically adjusting the pilot signals that are selected for continuous tracking.

69. (Previously Presented) The method of claim 67, wherein:

estimating a position of the communication device includes using time difference of arrival (TDOA) techniques.

70. (Previously Presented) The method of claim 67, wherein:

estimating a position of the communication device is performed within the communication device.